REMARKS

In paragraph 3 of the Office Action, the Examiner rejected Claims 1-4 and 9-23 (the Office Action recites claims 9-39, however, there are only 23 claims in the application as filed) under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 4,390,638 (hereinafter Mennemann et al.).

Reconsideration is requested.

The attached table (Exhibit A attached hereto) illustrates that the examples of the cited Mennemann et al. patent do not teach the invention as recited in the amended claims of the present application. In the table, the symbol "O" indicates an item that is out of the claimed range of each ingredient of the present invention, and "X" indicates an item that falls within the claimed range of each ingredient of the present invention.

As will be apparent from this table, amended claims 1 and 7 and the claims that depend thereon, are distinguishable from Mennemann et al., because of the recitation of "Li_2O within a range from 2-8.5%". Antecedent basis for this range of Li_2O can be found in Example Nos. 1 to 8 of the specification of the present application. Through the addition of this ingredient, the melting property of the glass is improved and the high thermal expansion property is increased while maintaining a high Young's modulus, (see specification page 9, second paragraph). This technical concept is not disclosed or suggested in Mennemann et al

In response to the Examiner's rejection of claims 17 and 23, and the claims that depend thereon, Applicant states

that the recitation of "said glass being substantially free of CaO" distinguishes the subject matter of these claims from the Mennemann et al. patent. In Mennemann et al., CaO is an essential ingredient that is required in the substantial amount of 7-25% (the preferable range being from 12-25%)(see col. 1, line 51 to col. 2, line 50) for increasing the refractive index while not impairing the Abbe number too excessively (see col. 3, lines 2-5). The composition of claims 17 and 23 of the present invention is substantially free of CaO and this recitation in the present application is not disclosed or suggested in Mennemann et al. Therefore, Claims 17 and 23, and the claims that depend thereon, are not anticipated by Mennemann et al., and it is requested that the rejection be withdrawn.

In paragraph 5 of the Office Action, the Examiner rejected Claims 5-6, 11 and 16 under 35 U.S.C. §103(a) as being unpatentable over Mennemann et al. in view of U.S. Pat. No. 5,719,989 (hereinafter Cushing).

The cited Cushing patent discloses a light filter utilizing a glass substrate comprised of dielectric layers that are stacked in the glass substrate for the light filter. However, since none of the examples of Mennemann et al. disclose the claimed composition of the present invention (as described above in response to the §102(b) rejection), it is impossible for one skilled in the art to reach the present invention by a combination of Mennemann et al. and Cushing. It is therefore requested that the §103(a) rejection be withdrawn.

New claims 28 and 33, and the claims that depend thereon, are based on claims 1 and 7 and contain the added recitation of the presence of "MgO within a range from 0-1%". These claims are not anticipated by the Mennemann et

al. patent. Antecedent basis for this range of MgO can be found in Example Nos. 1 to 8 of the specification of the present application. Through the addition of MgO, the melting property of the glass is improved and the high thermal expansion property is increased while maintaining a high Young's modulus (see specification page 9, third paragraph). This technical concept is not disclosed or suggested in Mennemann et al.

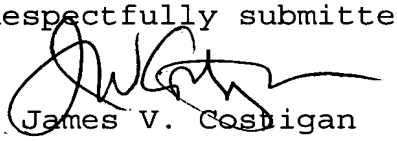
For these reasons, it is requested that all the above grounds for rejection be withdrawn and the new claims be allowed.

Based on the above amendments and remarks, applicant respectfully submits that all of Claims 1-5, 7-11 and 17-37 are now allowable over the prior art and that the present application is in proper form for allowance.

An early and favorable action is earnestly solicited.

Any required additional fee may be charged to Deposit Account No. 08-1540.

Respectfully submitted,



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MARKED UP COPY OF AMENDMENT TO CLAIMS

1. (amended) Glass for a light filter having a coefficient of thermal expansion within a range from 90 X 10^{-7}/°C to 120 X 10^{-7}/°C within a temperature range from -20°C to +70°C and having a composition which comprises, in weight percent:

one or more ingredients selected from the group consisting of SiO_2, B_2O_3 and P_2O_5 in the total amount of 35-55%, wherein the upper limit of SiO_2 is 41.5%;

one or more ingredients selected from the group consisting of TiO_2, La_2O_3, ZrO_2, Nb_2O_5, Ta_2O_5, WO_3 and Y_2O_3 in the total amount of 20-45%, wherein TiO_2 up to 30% is included and ZrO_2 is included within a range from 0 to 5%;

one or more ingredients selected from the group consisting of MgO, CaO, SrO, BaO and ZnO in the total amount of 3-20%;

Na_2O within the range from 0 to 14.5%; and

Li_2O within a range from 2 to 8.5%;

one or both of Sb_2O_3 and As_2O_3 in the total amount of 0-1%, said glass being substantially free of Al_2O_3, CdO and PbO.

7. (amended) Glass for a light filter having a coefficient of thermal expansion within a range from 90 X 10^{-7}/°C to 120 X 10^{-7}/°C within a temperature range from -20°C to +70°C and having a composition which comprises, in weight percent:

one or more ingredients selected from the group consisting of SiO_2, B_2O_3 and P_2O_5 in the total amount of 35-55%, wherein the upper limit of SiO_2 is 41.5%;

TiO_2 up to 30%;

ZrO_2 within a range from 0-5%;

one or more ingredients selected from the group consisting of MgO, CaO, SrO, BaO and ZnO in the total amount of 3-20%;

one or more ingredients selected from the group consisting of Li_2O, Na_2O and K_2O in the total amount of 5-30%, wherein Na_2O is included within a range from 0-14.5% and Li_2O is included within a range from 2 to 8.5%; and

one or both of Sb_2O_3 and As_2O_3 in the total amount of 0-1%,

said glass being substantially free of Al_2O_3, CdO and PbO.